

Floods during month of March, 1921.

River and station.	Flood stage.	Above flood stages—dates.		Crest.		River and station.	Flood stage.	Above flood stages—dates.		Crest.	
		From—	To—	Stage.	Date.			From—	To—	Stage.	Date.
ATLANTIC DRAINAGE.						MISSISSIPPI DRAINAGE—continued.					
<i>Connecticut:</i>	<i>Feet.</i>			<i>Feet.</i>		<i>Scioto—Continued.</i>	<i>Feet.</i>			<i>Feet.</i>	
White River Junction, Vt.....	13	9	18	16.8	9	Circleville, Ohio.....	10	7	11	12.0	8
	13	21	(**)	16.7	22	Chillicothe, Ohio.....	10	29	(**)	15.8	29
Hartford, Conn.....	16	11	19	19.9	12		14	8	9	14.7	9
	16	23	29	16.8	23, 27, 28		14	29	(**)	20.8	30
<i>Mohawk:</i>						<i>St. Lawrence:</i>					
Utica, N. Y.....	11	10	10	11.3	10	Delaware, Ohio.....	9	28	28	12.0	28
<i>Sacandaga:</i>						<i>Stillwater:</i>					
Northville, N. Y.....	14	10	10	14.0	10	West Milton, Ohio.....	10	28	28	10.5	28
<i>Hooisic:</i>						<i>Wabash:</i>					
Hooisic Falls, N. Y.....	3	10	10	3.7	10	Terre Haute, Ind.....	16	30	(**)	16.5	31
<i>Cape Fear:</i>						Bluffton, Ind.....	12	30	30	12.1	29
Elisabethtown, N. C.....	22	26	27	22.9	27	Lafayette, Ind.....	11	14	14	12.2	14
<i>Santee:</i>						Vincennes, Ind.....	11	28	(**)	18.7	29, 30
Ferguson, S. C.....	12	(*)	14	13.0	1-3		14	31	(**)	14.5	31
	12	29	29	12.1	29	Mount Carmel, Ill.....	16	15	15	15.0	15
Rimini, S. C.....	12	27	27	12.0	27		15	28	(**)	18.9	31
EAST GULF DRAINAGE.						<i>White (West Fork):</i>					
<i>Tombigbee:</i>						Decker, Ind.....	18	31	31	19.0	31
Demopolis, Ala.....	39	17	24	43.6	20	Anderson, Ind.....	12	28	29	15.0	28
<i>Pascagoula:</i>						Noblesville, Ind.....	14	29	30	15.1	29
Merrill, Miss.....	20	16	20	21.8	17	Elliston, Ind.....	19	27	(**)	25.8	31
<i>Leaf:</i>						<i>Wisconsin:</i>					
Hattiesburg, Miss.....	19	13	17	20.9	15	Knowlton, Wis.....	12	21	22	14.8	21
<i>Pearl:</i>						<i>Meramec:</i>					
Jackson, Miss.....	20	13	24	24.4	17	Steelville, Mo.....	12	28	28	12.6	28
Columbia, Miss.....	18	13	21	24.0	16	Pacific, Mo.....	11	25	(**)	17.0	30
<i>West Pearl:</i>						Valley Park, Mo.....	14	28	(**)	18.8	31
Pearl River, La.....	13	(*)	3	13.1	1, 2	<i>Bourbeuse:</i>					
	13	15	29	18.6	16	Union, Mo.....	10	29	30	13.6	30
GREAT LAKES DRAINAGE.						<i>Talahaatchie:</i>					
<i>Maumee:</i>						Swan Lake, Miss.....	25	(*)	4	25.3	1, 2
Fort Wayne, Ind.....	15	13	13	15.3	13		25	16	(**)	27.5	25-29
<i>Sandusky:</i>						<i>Ouachita:</i>					
Upper Sandusky, Ohio.....	13	10	10	13.2	10	Camden, Ark.....	30	15	21	35.1	17
<i>St. Joseph:</i>						<i>Arkansas:</i>					
Montpelier, Ohio.....	10	13	13	10.2	13	Fort Smith, Ark.....	22	24	25	22.8	25
	10	28	29	11.2	28	Dardanelle, Ark.....	20	26	26	20.6	26
MISSISSIPPI DRAINAGE.						<i>Neosho:</i>					
<i>Ohio:</i>						Fort Gibson, Okla.....	22	23	24	26.0	24
Henderson, Ky.....	33	13	15	34.0	15	<i>Petit Jean:</i>					
Evansville, Ind.....	35	13	17	36.4	14, 15	Danville, Ark.....	20	13	16	22.0	15
Mount Vernon, Ind.....	35	15	16	35.2	16	<i>White:</i>					
Shawneetown, Ill.....	35	15	18	35.7	17	Calico Rock, Ark.....	13	23	26	25.6	24
<i>Muskingum:</i>						Batesville, Ark.....	23	24	(**)	31.6	25
McConnellsville, Ohio.....	22	29	30	22.2	29	Newport, Ark.....	26	26	(**)	28.8	27
<i>Tuscarawas:</i>						Georgetown, Ark.....	22	28	(**)	25.2	31
Norris Point, Ohio.....	8	7	11	10.1	9	<i>Black:</i>					
	8	29	(**)	9.7	30	Black Rock, Ark.....	14	23	(**)	21.6	29
Coshocton, Ohio.....	8	7	11	10.5	10	<i>Cache:</i>					
	8	29	(**)	12.7	29	Patterson, Ark.....	9	14	16	9.2	15, 16
<i>Walhonding:</i>							9	25	(**)	9.4	29
Walhonding, Ohio.....	8	6	7	8.9	7	<i>Sulphur:</i>					
	8	10	10	8.9	10	Finley, Tex.....	24	16	22	25.9	17
	8	28	30	12.6	29	Ringo Crossing, Tex.....	20	13	17	23.5	15, 16
<i>Scioto:</i>						WEST GULF DRAINAGE.					
Larue, Ohio.....	11	10	10	12.0	10	Trinity:					
Prospect, Ohio.....	10	10	10	10.6	10	Trinidad, Tex.....	28	(*)	2	32.8	1
Bellpoint, Ohio.....	9	28	28	10.0	28	PACIFIC DRAINAGE.					
						<i>Sacramento:</i>					
						Knights Landing, Calif.....	18	1	2	18.4	2
						<i>Willamette:</i>					
						Portland, Oreg.....	15	19	20	15.1	20
						<i>Santiam:</i>					
						Jefferson, Oreg.....	10	17	17	10.8	17

* Continued from February.

** Continued into April.

EFFECT OF WEATHER ON CROPS AND FARMING OPERATIONS—MARCH, 1921.

By J. WARREN SMITH, Meteorologist.

The outstanding features of the weather during March, 1921, in its relation to agricultural and horticultural operations where the unusual and persistently mild temperatures that prevailed until near the close of the month and the disastrous cold wave that overspread nearly all sections of the country during the last few days. The unusually warm weather in all central and southern sections of the country had prematurely developed fruit to a stage of approximately one month in advance of the average season. From the 26th to the 30th a severe freeze occurred over a large section of the country where most fruit trees were in full bloom. Freezing temperatures extended as far south as the northern portions of the Gulf States and to North Carolina in the Atlantic coast section. Heavy damage to, and in most sections a

complete loss of, practically all early fruit and much of the later varieties was suffered over most of the central sections of the country.¹

The weather during the month was generally favorable for farm work and corn planting made good progress in the Southern States; cotton planting had become general over the southern portion of the belt at the close of the month. Winter grains made rapid progress until the cold wave the latter part of the month and no widespread damage occurred from the freeze. Spring-wheat seeding progressed satisfactorily for the most part, but was retarded the latter part of the month by precipitation and cold weather. By the close of the month much

¹ A more detailed account will appear in the April REVIEW.

of the crop had been sown in South Dakota and seeding was nearing completion in Iowa. The seeding of spring oats made satisfactory advance in the trans-Mississippi States but was considerably interrupted in much of the Ohio and central Mississippi Valleys by frequent rains. Truck crops in the South were favorably affected by the weather, but the freeze the latter part of the month

caused much damage to early truck in Oklahoma, Arkansas, and central Texas, while some damage resulted in Tennessee and North Carolina, and locally in the northern portions of the East Gulf States. Pastures improved rapidly in the Central and Eastern States and no serious loss of stock was reported in the West.

CLIMATOLOGICAL TABLES.*

CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course the number of such records is smaller than the total number of stations.

Condensed climatological summary of temperature and precipitation by sections, March, 1921.

Section.	Temperature.								Precipitation.							
	Section average.	Departure from the normal.	Monthly extremes.						Section average.	Departure from the normal.	Greatest monthly.		Least monthly.			
			Station.	Highest.	Date.	Station.	Lowest.	Date.			Station.	Amount.	Station.	Amount.		
	° F.	° F.		° F.				° F.	In.	In.		In.	In.			
Alabama.....	64.0	+ 7.7	Florence.....	99	15	2 stations.....	27	3†	4.90	-0.94	Citronelle.....	12.20	Evergreen.....	1.20		
Arizona.....	55.6	+ 3.7	2 stations.....	98	2†	Chin Lee.....	8	9	0.38	-0.67	Seligman.....	1.98	7 stations.....	0.00		
Arkansas.....	60.8	+ 8.3	Texarkana.....	92	21	2 stations.....	18	29	6.65	+2.10	Gravette.....	11.01	Mena.....	2.98		
California.....	53.9	+ 2.1	Greenland Ranch.....	97	31	Fordeys Dam.....	8	19	2.86	-1.88	Branscomb.....	9.08	2 stations.....	0.00		
Colorado.....	39.4	+ 4.9	Lamar.....	90	18	Dillon.....	-24	9	1.25	-0.10	Silver Lake.....	8.31	La Porte.....	0.02		
Florida.....	70.8	+ 5.4	4 stations.....	94	8†	2 stations.....	33	1†	2.00	-1.16	Fort Lauderdale.....	9.90	Middleburg.....	0.00		
Georgia.....	64.5	+ 7.7	Glennville.....	94	22	Blue Ridge.....	27	1	1.68	-3.21	Tallapoosa.....	3.80	Greensboro.....	0.25		
Hawaii (February).....	69.6	+ 1.3	2 stations.....	88	1†	Glenwood.....	46	25	2.57	-4.11	Kopitula.....	7.38	Halaula.....	0.00		
Idaho.....	39.3	+ 2.8	Glenns Ferry.....	89	28	Stanley.....	-10	20	1.59	-0.15	Wallace.....	6.84	Oakley.....	0.21		
Illinois.....	50.0	+ 9.9	3 stations.....	83	15†	Mount Carroll.....	9	28	5.13	+2.10	Decatur.....	7.71	Griggsville.....	2.46		
Indiana.....	50.5	+10.1	Marengo.....	88	7	3 stations.....	13	29	5.74	+2.01	Shelbyville.....	8.25	Hobart.....	3.17		
Iowa.....	42.8	+ 9.5	3 stations.....	86	18†	Northwood.....	4	28	1.57	-0.20	Burlington.....	6.62	Waverly.....	0.17		
Kansas.....	50.0	+ 7.3	Ellsworth.....	93	18	2 stations.....	6	9	1.41	+0.06	Lawrence.....	5.18	6 stations.....	T.		
Kentucky.....	56.7	+10.7	2 stations.....	87	15†	Shelbyville.....	19	29	5.75	+1.09	Shelbyville.....	9.12	Pikeville.....	2.66		
Louisiana.....	68.6	+ 7.8	do.....	92	21	Calhoun.....	28	29	5.75	+1.35	Clinton.....	15.36	Burrwood.....	0.58		
Maryland-Delaware.....	53.7	+11.3	Hancock, Md.....	91	27	2 stations.....	14	29	2.39	-1.25	Denton, Md.....	3.71	Keedysville, Md.....	1.46		
Michigan.....	29.0	+ 3.6	Canby.....	84	18	Itasca State Park.....	-23	29	1.47	+0.30	Redwood Falls.....	2.69	Hinckley.....	0.84		
Minnesota.....	65.5	+ 8.4	Angulla.....	91	20	Holly Springs.....	27	29	7.99	+2.64	Magnolia.....	20.85	Bay St. Louis.....	2.18		
Mississippi.....	51.9	+ 8.5	Eldon.....	90	18	2 stations.....	11	28†	4.69	+1.68	Dean.....	11.28	Oregon.....	0.65		
Missouri.....	33.1	+ 2.7	Three Forks.....	79	3	Babb.....	-34	13	1.36	+0.41	Heron.....	5.81	Mildred.....	0.08		
Montana.....	42.9	+ 7.3	Alma.....	90	18	Fort Robinson.....	0	7	0.64	-0.45	Fremont.....	2.38	4 stations.....	T.		
Nebraska.....	45.3	+ 4.0	Logandale.....	88	2†	Millett.....	9	27	0.40	-0.58	Sharp.....	2.00	3 stations.....	0.00		
Nevada.....	39.7	+ 9.4	3 stations.....	84	21	2 stations.....	-10	5†	3.06	-0.64	Torrington, Conn.....	6.07	Houlton, Me.....	1.62		
New England.....	49.1	+10.3	Woodbine.....	92	27	Culvers Lake.....	9	30	3.03	-0.86	Dover.....	4.65	Somerville.....	1.80		
New Jersey.....	47.7	+ 3.0	Artasia.....	89	17	Elizabethtown.....	-12	9	0.63	-0.16	Harveys Upper Ra'h.....	2.15	5 stations.....	0.60		
New Mexico.....	41.3	+ 9.8	4 stations.....	85	21	Wanakena.....	-4	6	3.32	+0.30	North Lake.....	6.47	Chazy.....	0.69		
North Carolina.....	58.6	+ 8.9	Winston-Salem.....	91	21	Highland.....	17	4	2.86	-1.50	Belhaven.....	6.21	Hatteras.....	1.18		
North Dakota.....	25.2	+ 2.6	Ellendale.....	75	18	Fessenden.....	-22	12	1.00	+0.17	Fullerton.....	2.69	Taylor.....	0.04		
Ohio.....	48.9	+10.1	Haydenville.....	87	27	Paulding.....	15	29	5.94	+2.47	Springfield.....	8.71	Gallipolis.....	2.73		
Oklahoma.....	57.0	+ 4.7	Beaver.....	94	18	Hurley.....	9	9	3.12	+1.05	Claremore.....	7.59	2 stations.....	T.		
Oregon.....	43.9	+ 1.8	The Dalles.....	80	29	Lapine.....	4	9	2.91	-0.21	Cascade Locks.....	11.55	Silver Lake.....	0.14		
Pennsylvania.....	48.0	+10.8	Lancaster.....	88	28	West Bingham.....	7	4	3.38	-0.19	Corry.....	6.15	Creekside.....	1.05		
Porto Rico.....	73.5	- 6.4	Cayey.....	92	18†	Caguas.....	52	19	4.67	+1.16	Comerio Falls.....	10.97	Potals.....	0.00		
South Carolina.....	62.5	+ 7.5	3 stations.....	91	16†	2 stations.....	28	4	2.28	-1.58	Florence.....	4.42	Batesburg.....	0.77		
South Dakota.....	37.0	+ 6.5	Howell.....	90	18	3 stations.....	-7	21	1.08	+0.21	Castlewood.....	2.74	Oakrichs.....	0.02		
Tennessee.....	59.6	+10.0	Newport.....	89	20†	Tazewell.....	22	4	5.43	+0.09	Moscow.....	11.36	Charleston.....	1.94		
Texas.....	64.5	+ 5.6	Missou.....	100	21	Romero.....	10	9	2.90	+0.82	Pierce.....	9.59	Panhandle.....	0.00		
Utah.....	42.4	+ 4.0	St. George.....	85	18	Black's Fork.....	-17	9	1.21	-0.33	Silver Lake.....	5.47	Myton.....	0.00		
Virginia.....	55.9	+10.6	Quantico.....	92	21	Mount Weather.....	17	29	2.04	-1.71	Runnymede.....	4.16	Mount Weather.....	0.80		
Washington.....	42.2	+ 0.8	Lowden.....	77	29	Republic.....	3	12	3.17	+0.30	Cedar Lake.....	9.40	2 stations.....	T.		
West Virginia.....	52.7	+10.0	Charleston.....	90	20†	Marlinton.....	10	30	2.84	-0.87	Charleston.....	5.75	Union.....	0.63		
Wisconsin.....	31.2	+ 5.6	Beloit.....	80	20	Winter.....	-19	9	2.33	+0.61	Stanley.....	6.10	Solon Springs.....	0.60		
Wyoming.....	35.2	+ 4.3	Wyncoote.....	82	18	Fox Park.....	-20	27	0.71	-0.34	Bow Ranger.....	2.40	Hyattville.....	0.00		

* For description of tables and charts, see this REVIEW, January, 1921, p. 41.

† Other dates also.